

**Agency for Healthcare Research and Quality
Patient Safety Indicators (PSI)**

ICD-9-CM and DRG Coding Updates to Version 4.1

December 02, 2009

The following changes were implemented in version 4.1 of the Patient Safety Indicator (PSI) software code (both SAS and Windows) and reflect changes to indicator definitions based on updates to ICD-9-CM and DRG codes for Fiscal Year 2009 (effective 10-1-2008). All changes noted below have been incorporated into the software syntax, software documentation, and the *Patient Safety Indicators Technical Specifications*. With this software update, the PSI software definitions now incorporate ICD-9-CM codes valid from October 1, 1994 through September 30, 2009.

Indicator Name (#)	Component	Change
<u>PSI #3 – Pressure Ulcers (formerly Decubitus Ulcer)</u>	Add denominator exclusion for diagnosis of Stage I or Stage II	707.20 PRESSURE ULCER, STAGE NOS 707.21 PRESSURE ULCER, STAGE I 707.22 PRESSURE ULCER, STAGE II
<u>PSI #4 – Death in surgical inpatients</u>	Add diagnosis code to denominator inclusion for pneumonia	Modify code: 482.41 Methicillin susceptible pneumonia due to Staphylococcus aureus Add code: 482.42 Methicillin resistant pneumonia due to Staphylococcus aureus
<u>PSI #4 – Death in surgical inpatients</u>	Add diagnosis code to denominator inclusion for sepsis and denominator exclusion for sepsis	Modify code: 038.11 Methicillin susceptible staphylococcus aureus septicemia Add code: 038.12 Methicillin resistant Staphylococcus aureus septicemia
<u>PSI #6 and #22 – Iatrogenic Pneumothorax</u>	Add procedure codes to denominator exclusion for diaphragmatic surgery repair	53.71 Laparoscopic repair of diaphragmatic hernia, abdominal approach 53.72 Other and open repair of diaphragmatic hernia, abdominal approach 53.75 Repair of diaphragmatic hernia, abdominal approach, NOS 55.83 Laparoscopic repair of diaphragmatic hernia, with thoracic approach 55.84 Other and open repair of diaphragmatic hernia, with thoracic approach
<u>PSI #6 and #22 – Iatrogenic Pneumothorax</u>	Add diagnosis codes to denominator exclusion for pleural effusion	511.81 Malignant pleural effusion 511.89 Other specified forms of effusion, except tuberculosis

Indicator Name (#)	Component	Change
<u>PSI #6 and #22 – Iatrogenic Pneumothorax</u>	Add procedure codes to denominator exclusion for cardiac procedures	37.36 Excision or destruction of left atrial appendage (LAA) 37.55 Removal of internal biventricular heart replacement system 37.60 Implantation or insertion of biventricular external heart assist system
<u>PSI #8 – Postoperative hip fracture</u>	Add diagnosis codes to denominator exclusion for coma	249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled
<u>PSI #8 – Postoperative hip fracture</u>	Add diagnosis codes to denominator exclusion for lymphoid malignancy	203.02 MULT MYELOMA IN RELAPSE 203.12 PLSM CEL LEUK IN RELAPSE 203.82 OTH IMNPRLF NEO-RELAPSE 204.02 ACT LYMP LEUK IN RELAPSE 204.12 CHR LYMP LEUK IN RELAPSE 204.22 SBAC LYM LEUK IN RELAPSE 204.82 OTH LYM LEUK IN RELAPSE 204.92 LYMP LEUK NOS RELAPSE 205.02 ACT MYEL LEUK IN RELAPSE 205.12 CHR MYEL LEUK IN RELAPSE 205.22 SBAC MYL LEUK IN RELAPSE 205.32 MYEL SARCOMA IN RELAPSE 205.82 OTH MYEL LEUK IN RELAPSE 205.92 MYEL LEUK NOS IN RELAPSE 206.02 ACT MONO LEUK IN RELAPSE 206.12 CHR MONO LEUK IN RELAPSE 206.22 SBAC MONO LEU IN RELAPSE 206.82 OTH MONO LEUK IN RELAPSE 206.92 MONO LEUK NOS RELAPSE 207.02 AC ERTH/ERYLK IN RELAPSE 207.12 CHR ERYTHRMIA IN RELAPSE 207.22 MGKRYCYT LEUK IN RELAPSE 207.82 OTH SPF LEUK IN RELAPSE 208.02 AC LEUK UNS CL RELAPSE 208.12 CH LEU UNS CL IN RELAPSE 208.22 SBAC LEU UNS CL-RELAPSE 208.82 OTH LEUK UNS CL-RELAPSE 208.92 LEUKEMIA NOS IN RELAPSE
<u>PSI #8 – Postoperative hip fracture</u>	Add diagnosis codes to denominator exclusion for syncope	337.01 Carotid sinus syndrome

Indicator Name (#)	Component	Change
<p><u>PSI #10 – Postoperative metabolic and physiologic derangement</u></p>	<p>Add diagnosis codes to denominator exclusion for diabetes</p>	<p>249.00 Secondary diabetes mellitus without mention of complication, not stated as controlled or unspecified 249.01 Secondary diabetes mellitus without mention of complication, uncontrolled 249.10 Secondary diabetes mellitus with ketoacidosis, unspecified 249.11 Secondary diabetes mellitus with ketoacidosis, uncontrolled 249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled 249.40 Secondary diabetes mellitus with renal manifestations, unspecified 249.41 Secondary diabetes mellitus with renal manifestations, uncontrolled 249.50 Secondary diabetes mellitus with ophthalmic manifestations, unspecified 249.51 Secondary diabetes mellitus with ophthalmic manifestations, uncontrolled 249.60 Secondary diabetes mellitus with neurological manifestations, unspecified 249.61 Secondary diabetes mellitus with neurological manifestations, uncontrolled 249.70 Secondary diabetes mellitus with peripheral circulatory manifestations, unspecified 249.71 Secondary diabetes mellitus with peripheral circulatory manifestations, uncontrolled 249.80 Secondary diabetes mellitus with other specified manifestations, unspecified 249.81 Secondary diabetes mellitus with other specified manifestations, uncontrolled 249.90 Secondary diabetes mellitus with unspecified manifestations, unspecified 249.91 Secondary diabetes mellitus with unspecified manifestations, uncontrolled</p>

Indicator Name (#)	Component	Change
<u>PSI #10 – Postoperative metabolic and physiologic derangement</u>	Add diagnosis codes to numerator inclusion for diabetes with ketoacidosis	249.10 Secondary diabetes mellitus with ketoacidosis, unspecified 249.11 Secondary diabetes mellitus with ketoacidosis, uncontrolled 249.20 Secondary diabetes mellitus with hyperosmolarity, unspecified 249.21 Secondary diabetes mellitus with hyperosmolarity, uncontrolled 249.30 Secondary diabetes mellitus with other coma, unspecified 249.31 Secondary diabetes mellitus with other coma, uncontrolled
<u>PSI #13 – Postoperative sepsis</u>	Add diagnosis code to numerator inclusion for sepsis	Modify code: 038.11 Methicillin susceptible staphylococcus aureus septicemia Add code: 038.12 Methicillin resistant Staphylococcus aureus septicemia
<u>PSI #14 and 24 – Postoperative wound dehiscence</u>	Add procedure codes to denominator inclusion for abdominopelvic procedures	17.31 Laparoscopic multiple segmental resection of large intestine 17.32 Laparoscopic cecectomy 17.33 Laparoscopic right hemicolectomy 17.34 Laparoscopic resection of transverse colon 17.35 Laparoscopic left hemicolectomy 17.36 Laparoscopic sigmoidectomy 17.39 Other laparoscopic partial excision of large intestine 45.81 Laparoscopic total intra-abdominal colectomy 45.82 Open total intra-abdominal colectomy 45.83 Other and unspecified total intra-abdominal colectomy 48.40 Pull-through resection of rectum, not otherwise specified 48.43 Open pull-through resection of rectum 48.50 Abdominoperineal resection of the rectum, NOS 48.52 Open abdominoperineal resection of the rectum 48.59 Other abdominoperineal resection of the rectum 53.75 Repair of diaphragmatic hernia, abdominal approach, NOS
<u>PSI #15 – Accidental puncture or laceration</u>	Add procedure codes to denominator inclusion for spinal surgeries	80.53 Repair of the annulus fibrosus with graft or prosthesis 80.54 Other and unspecified repair of the annulus fibrosus

Indicator Name (#)	Component	Change
<u>Multiple – Cancer</u>	Add diagnosis codes to denominator exclusion for cancer	203.02 MULT MYELOMA IN RELAPSE 203.12 PLSM CEL LEUK IN RELAPSE 203.82 OTH IMNPRLF NEO-RELAPSE 204.02 ACT LYMP LEUK IN RELAPSE 204.12 CHR LYMP LEUK IN RELAPSE 204.22 SBAC LYM LEUK IN RELAPSE 204.82 OTH LYM LEUK IN RELAPSE 204.92 LYMP LEUK NOS RELAPSE 205.02 ACT MYEL LEUK IN RELAPSE 205.12 CHR MYEL LEUK IN RELAPSE 205.22 SBAC MYL LEUK IN RELAPSE 205.32 MYEL SARCOMA IN RELAPSE 205.82 OTH MYEL LEUK IN RELAPSE 205.92 MYEL LEUK NOS IN RELAPSE 206.02 ACT MONO LEUK IN RELAPSE 206.12 CHR MONO LEUK IN RELAPSE 206.22 SBAC MONO LEU IN RELAPSE 206.82 OTH MONO LEUK IN RELAPSE 206.92 MONO LEUK NOS RELAPSE 207.02 AC ERTH/ERYLK IN RELAPSE 207.12 CHR ERYTHRMIA IN RELAPSE 207.22 MGKRYCYT LEUK IN RELAPSE 207.82 OTH SPF LEUK IN RELAPSE 208.02 AC LEUK UNS CL RELAPSE 208.12 CH LEU UNS CL IN RELAPSE 208.22 SBAC LEU UNS CL-RELAPSE 208.82 OTH LEUK UNS CL-RELAPSE 208.92 LEUKEMIA NOS IN RELAPSE 209.00 MAL CRCNOID SM INTST NOS 209.01 MALIG CARCINOID DUODENUM 209.02 MALIG CARCINOID JEJUNUM 209.03 MALIG CARCINOID ILEUM 209.10 MAL CRCNOID LG INTST NOS 209.11 MALIG CARCINOID APPENDIX 209.12 MALIG CARCINOID CECUM 209.13 MAL CRCNOID ASCEND COLON 209.14 MAL CRCNOID TRANSV COLON 209.15 MAL CARCINOID DESC COLON 209.16 MAL CARCINOID SIG COLON 209.17 MALIG CARCINOID RECTUM 209.20 MAL CRCND PRIM SITE UNKN 209.21 MAL CARCINOID BRONC/LUNG 209.22 MALIG CARCINOID THYMUS 209.23 MALIG CARCINOID STOMACH 209.24 MALIG CARCINOID KIDNEY 209.25 MAL CARCNOID FOREGUT NOS 209.26 MAL CARCINOID MIDGUT NOS 209.27 MAL CARCNOID HINDGUT NOS 209.29 MALIG CARCINOID OTH SITE

Indicator Name (#)	Component	Change
<u>Multiple – Immuno-compromised</u>	Add diagnosis codes to denominator exclusion for immuno-compromised	<p>199.2 Malignant neoplasm associated with transplanted organ</p> <p>238.77 Neoplasm of uncertain behavior, post-transplant lymphoproliferative disorder (PTLD)</p> <p>238.79 Neoplasm of uncertain behavior, other lymphatic and hematopoietic tissues</p> <p>279.50 Graft-versus-host disease unspecified</p> <p>279.51 Acute graft-versus-host disease</p> <p>279.52 Chronic graft-versus-host disease</p> <p>279.53 Acute on chronic graft-versus-host disease</p> <p>V45.11 Renal dialysis status</p>
<u>Multiple – Infection</u>	Add diagnosis codes to denominator exclusion for infection	<p>Modify codes;</p> <p>038.11 Methicillin susceptible staphylococcus aureus septicemia</p> <p>041.11 Methicillin susceptible staphylococcus aureus</p> <p>482.41 Methicillin susceptible pneumonia due to staphylococcus aureus</p> <p>Add codes:</p> <p>038.12 Methicillin resistant Staphylococcus aureus septicemia</p> <p>041.12 Methicillin resistant Staphylococcus aureus (MRSA)</p> <p>482.42 Methicillin resistant pneumonia due to staphylococcus aureus</p> <p>707.20 Pressure ulcer unspecified stage</p> <p>707.22 Pressure ulcer stage II</p> <p>707.23 Pressure ulcer stage III</p> <p>707.24 Pressure ulcer stage IV</p> <p>777.50 Necrotizing enterocolitis in newborn, unspecified</p> <p>777.51 Stage I necrotizing enterocolitis in newborn</p> <p>777.52 Stage II necrotizing enterocolitis in newborn</p> <p>777.53 Stage III necrotizing enterocolitis in newborn</p>
Multiple PSI Indicators	DRG	Updated to Version 26.0

Indicator Name (#)	Component	Change
<p><u>Multiple - Operating Room Procedure Codes</u></p>	<p>ICD-9-CM Operating Room procedure codes added or edited in either FY2007 or FY2008</p>	<p>Renamed code: 398 CARTD BODY/SINUS/VASC OP</p> <p>Added codes: 0094 INTRA-OP NEUROPHYS MONTR 0110 INTRACRAN PRESSURE MONTR 0116 INTRACRANIAL 02 MONITOR 0117 BRAIN TEMP MONITORING 0783 THORAC PART EXISN THYMUS 0784 THORAC TOTAL EXC THYMUS 0795 THORAC INCISION THYMUS 0798 OTH THORAC OP THYMUS NOS 1711 LAP DIR ING HERN-GRAFT 1712 LAP INDIR ING HERN-GRAFT 1713 LAP ING HERN-GRAFT NOS 1721 LAP BIL DIR ING HRN-GRFT 1722 LAP BI INDIR ING HRN-GRF 1723 LAP BI DR/IND ING HRN-GR 1724 LAP BIL ING HERN-GRF NOS 1731 LAP MUL SEG RES LG INTES 1732 LAPAROSCOPIC CECECTOMY 1733 LAP RIGHT HEMICOLECTOMY 1734 LAP RES TRANSVERSE COLON 1735 LAP LEFT HEMICOLECTOMY 1736 LAP SIGMOIDECTOMY 1739 LAP PT EX LRG INTEST NEC 1741 OPEN ROBOTIC ASSIST PROC 1742 LAP ROBOTIC ASSIST PROC 1743 PERC ROBOTIC ASSIST PROC 1744 ENDO ROBOTIC ASSIST PROC 1745 THORACO ROBOTIC AST PROC 1749 ROBOTIC AST PROC NEC/NOS 3220 THORAC EXC LUNG LESION 3230 THORAC SEG LUNG RESECT 3239 OTH SEG LUNG RESECT NOS 3241 THORAC LOBECTOMY LUNG 3249 LOBECTOMY OF LUNG NEC 3250 THORACOSPC PNEUMONECTOMY 3259 OTHER PNEUMONECTOMY NOS 3320 THORACOSPC LUNG BIOPSY 3372 ENDO PULM ARWY FLOW MSMT 3406 THORAC DRAIN PLEURL CAV 3420 THORACOSCOPIC PLEURAL BX 3452 THORACOSPC DECORT LUNG 3736 EXC LEFT ATRIAL APPENDAG 3755 REM INT BIVENT HRT SYS 3823 INTRAVASCLR SPECTROSCOPY 398 CARTD BODY/SINUS/VASC OP 4581 LAP TOT INTR-AB COLECTMY 4582 OP TOT INTR-ABD COLECTMY 4583 TOT ABD COLECTMY NEC/NOS 4842 LAP PULL-THRU RES RECTUM 4843 OPN PULL-THRU RES RECTUM 5013 TRANSJUGULAR LIVER BX</p>

<i>Indicator Name (#)</i>	<i>Component</i>	<i>Change</i>
		5014 LAPAROSCOPIC LIVER BX
		4851 LAP ABDPERNEAL RESC REC
		4852 OPN ABDPERNEAL RESC REC
		4859 ABDPERNEAL RESC RECT NEC
		5013 TRANSJUGULAR LIVER BX
		5014 LAPAROSCOPIC LIVER BX
		5342 LAP UMBIL HERNIA-GRAFT
		5343 LAP UMBILICAL HERNIA NEC
		5362 LAP INCIS HERN REPR-GRFT
		5363 LAP HERN ANT ABD-GFT NEC
		5371 LAP ABD REP-DIAPHR HERN
		5372 OPN ABD DIAPHRM HERN NEC
		5375 ABD REP-DIAPHR HERN NOS
		5383 LAP THORC APP-DIAPH HERN
		5384 OPN THORC DIAPH HERN NEC
		7053 CYSTO & RECTO W GRF/PROS
		7054 REP CYSTOCEL W GRFT/PROS
		7055 REP RECTOCELE W GRF/PROS
		7063 VAGINAL CONST W GRF/PROS
		7064 VAG RECONST W GRFT/PROS
		7078 VAG SUSP/FIX W GRFT/PROS
		7093 CUL-DE-SAC GRF/PROS NEC
		7094 INSERT BIOLOGICAL GRAFT
		7095 INSERT SYNTH GRAFT/PROST
		8053 REP ANULUS FIBROSUS-GRFT
		8054 REP ANULS FIBROS NEC/NOS
		8480 INS/REPL INTERSPINE DEV
		8481 REV INTERSPINE DEVICE
		8482 INS/REPL PDCL STABIL DEV
		8483 REV PEDCL DYN STABIL DEV
		8484 INS/REPL FACET REPLC DEV
		8485 REV FACET REPLACE DEVICE
		8571 LATISS DORSI MYOCUT FLAP
		8572 TRAM FLAP, PEDICLED
		8573 TRAM FLAP, FREE
		8574 DIEP FLAP, FREE
		8575 SIEA FLAP, FREE
		8576 GAP FLAP, FREE
		8579 TOTL RECONST BREAST NEC